

- to cancel*
- a rotary support for rotating the article so as to spread said predetermined quantity of coating under the effect of centrifugal force; and
 - a nozzle for applying the coating directly on at least a portion of the surface of the article that is not covered by the coating being spread under the effect of centrifugal force.--

REMARKS

Claims 1-44 are pending. By this Amendment, claims 1, 4, 8, 9, 11 and 19 have been amended and claims 30-44 have been added.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

The Information Disclosure Statement filed on June 11, 1999 was objected to as failing to provide a copy of JP 07 240360 ('360) and for failing to list JP 07 185414 ('414) on the Form PTO-1449. Applicant hereby submits a supplemental Information Disclosure Statement which lists on the form PTO-1449 both '360 and '414 and includes an attached copy of the Abstract for '360 and '414. It is respectfully requested the references be considered and the form PTO-1449 be initialed to indicate consideration of the references.

A Restriction Requirement was asserted between Group I, claims 1-18, Group II, claims 19-24 and Group III, claims 25-29. The Restriction Requirement is respectfully traversed.

The Restriction Requirement states that Group I, claims 1-18, and Group II, claims 19-24 are related as process and apparatus for its practice. The Examiner thus asserts that the apparatus can be used for applying adhesive or applying water in a cleaning process or could be used for coating a planar substrate such as a wafer or compact disc with a photoresist or developer.

Claim 1 of Group I recites a method of applying a coating. Claim 19 of Group II recites an apparatus for applying a coating. Accordingly, it is respectfully submitted that the depositing of the coating and the spreading of the coating by rotating the article cannot be made by another or a materially different process other than a dispenser and a rotary support as recited in claim 19.

The Restriction Requirement also states that Group I, claims 1-18, and Group III, claims 25-29, are related as a process and a product made. The Examiner thus asserts that the product can be made by a materially different process/apparatus.

Claim 1 of Group I recites a method of applying a coating. Claim 25 of Group III recites a painted or varnished hollow article. Accordingly, it is respectfully submitted that the product of claim 25 cannot be made by another or by a materially different process other than by depositing a coating and causing the article to revolve. It is respectfully requested the Restriction Requirement be withdrawn.

Claims 1-18 were rejected under 35 U.S.C. §112, second paragraph. Specific language in claims 1, 4, 8, 9 and 11 was identified as forming the basis for the rejection. Claims 1, 4, 8, 9 and 11 have been amended solely in reply to the rejection. It is respectfully requested the rejection be withdrawn.

Claims 1-3 and 6 were rejected under 35 U.S.C. §102(b) and claim 4 was rejected under 35 U.S.C. §103(a) over Hammen, U.S. Patent No. 5,763,004. The rejections are respectfully traversed.

Applicant asserts Hammen fails to disclose Applicant's method of applying a coating including the step of depositing a predetermined quantity of coating in the fluid state on a center area of the bottom, the center being spaced from the side wall as recited in amended claim 1.

Hammen fails to disclose Applicant's claimed invention because Hammen deposits a coating along the sides of the surface but not at the center of the surface. In particular, Hammen disclose an appliance and a process for introducing sealing compound into lug caps. In providing the sealing coating, an injection unit 14 of the appliance contains a nozzle block 16 with annularly arranged injection nozzles 17 (col. 3, lines 1-3 and Fig. 2). When placing the sealing compound into the lug cap 12, the lug cap 12 is rotated by a turntable 10 while a sealing compound is ejected from the annularly arranged injection nozzles 17.

Hammen thus fails to disclose Applicant's invention because the nozzles 17 are annularly arranged. Thus, Hammen cannot deposit the coating on the center of the lug cap 12 because the nozzles are only distributed around the center of the lug cap 12. It is neither taught nor disclosed in Hammen to provide an injection nozzle 17 at the center of the nozzle block 16. Thus, Hammen fails to disclose Applicant's method wherein a predetermined quantity of coating in the fluid state is deposited on a center area of the bottom as recited in claim 1.

In addition, claims 2-4 and 6 recite additional features of the invention and are also believed to be allowable at least for the reasons discussed above with respect to claim 1 and for the additional features recited therein. It is respectfully requested the rejections be withdrawn.

Claims 1, 2 and 5-8 were rejected under 35 U.S.C. §102(b) and claims 9 and 11 were rejected under 35 U.S.C. §103(a) over Clark, U.S. Patent No. 3,804,663. The rejections are respectfully traversed.

Applicant asserts Clark fails to disclose Applicant's method of applying a coating including the step of depositing a predetermined quantity of coating in the fluid state on a center area of the bottom as recited in claim 1.

Clark fails to disclose Applicant's claimed invention because the coating is poured into a hollow article rather than deposited at the center area of the hollow article. In particular, Clark discloses a method of internally coating rigid or semi-rigid plastic containers. In coating the internal surface of a cylindrical container (Figs. 1 and 3), the container is placed on a spindle and 3 grams of saran latex is poured into the container (col. 4, lines 44-48). Thereafter, the container is spun to allow the latex to spread onto the interior walls of the container.

Clark fails to disclose Applicant's claimed invention because the saran latex is poured into a hollow article and not deposited on a center area spaced from the side wall. Applicant asserts the pouring of the saran latex is not equivalent to placing a coating in the center area spaced from the side wall because the effects of pouring the saran latex into the hollow article results in both the center area and side wall being deposited with the saran latex. Furthermore, it is neither taught nor suggested in Clark to deposit the saran latex only at the center area. Thus, Clark fails to disclose Applicant's method wherein a predetermined quantity of coating in the fluid state is deposited on a center area of the bottom, the center area being spaced from the side wall as recited in claim 1.

In addition, claims 2, 5-9 and 11 recite additional features of the invention and are also believed to be allowable at least for the reasons discussed above with respect to claim 1 and for the additional features recited therein. It is respectfully requested the rejections be withdrawn.

Claims 1, 10 and 15 were rejected under 35 U.S.C. §102(b) and claims 12-14 were rejected under 35 U.S.C. §103(a) over Iwasaki, U.S. Patent No. 5,002,799 (Iwasaki '799). The rejections are respectfully traversed.

Applicant asserts Iwasaki fails to disclose Applicant's method of applying a coating comprising the step of depositing a predetermined quantity of coating in the fluid state on a

center area of the bottom, the center area being spaced from the side wall as recited in claim 1.

Iwasaki '799 fails to disclose Applicant's claimed invention because Iwasaki '799 fails to deposit a coating in a fluid state. In particular, Iwasaki '799 disclose a method for manufacturing anti-static cathode ray tubes. In coating the cathode ray tubes, the tubes are rotated at a relatively low speed with a certain quantity of coating solution 19 sprayed onto the external surface of the face plate 104 from injection nozzle 116 above the face plate (col. 4, lines 55-65). Once the coating solution 119 is spread to some extent all over the external face of the face plate 104, the speed of the spin-coating machine 114 is raised to spin the cathode ray tube at a high speed, thereby distributing the coating film evenly over the face plate and stabilizing it.

However, as stated above, Iwasaki '799 fails to disclose Applicant's claimed invention because the coating used by Iwasaki '799 is dispersed in fine droplets as it is sprayed onto the face plate 104. Conversely, in Applicant's claimed invention, the coating is deposited while in a fluid state. It is neither disclosed nor suggested in Iwasaki '799 to apply a coating other than by spraying. Thus, Iwasaki '799 fails to disclose a method of applying a coating wherein a predetermined quantity of coating is deposited while in the fluid state as recited in claim 1.

In addition, claims 10 and 12-15 recite additional features of the invention and are also believed to be allowable at least for the reasons discussed above with respect to claim 1 and for the additional features recited therein. It is respectfully requested the rejections be withdrawn.

Claims 16-18 were rejected under 35 U.S.C. §103(a) of Iwasaki '799 in view of Iwasaki, U.S. Patent No. 5,599,579 (Iwasaki '579). The rejection is respectfully traversed.

Iwasaki '579 fails to overcome the deficiencies of Iwasaki '799 because Iwasaki '579 also fails to apply coating which is deposited in a fluid state as recited in Applicant's claim 1.

Thus, neither Iwasaki '799 nor Iwasaki '579, either alone or in combination disclose or suggest a method of applying a coating comprising the step of depositing a predetermined quantity of coating in the fluid state on a center area of the bottom, the center area being spaced from the side wall as recited in claim 1. It is respectfully requested the rejection be withdrawn.

In view of the foregoing, reconsideration of the application is requested. It is submitted the claims as presented herein patentably distinguish over the applied references and fully meet the requirements of 35 U.S.C. §112. Accordingly, allowance of claims 1-44 is respectfully solicited.

Should the Examiner believe anything further is desirable to place the application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

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TC 1700

Respectfully submitted,



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Attachment:
Appendix

Date: September 21, 2001

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<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
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APPENDIX

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Changes to Claims:

Claims 30-44 are added.

The following is a marked-up version of the amended claims:

1. (Amended) A method of applying a coating ~~such as a varnish or a paint~~ on a hollow article comprising a bottom and a side wall, the method including the steps of depositing a predetermined quantity of coating in the fluid state on ~~the a center of a surface of the article~~ area of said bottom, said center area being spaced from said side wall, and in spreading it by causing the article to revolve.

4. (Amended) A method according to claim 3, wherein the coating is heated to a temperature lying in the range 40°C to 50°C ~~and preferably 45°C~~.

8. (Amended) A method according to claim 5, wherein the quantity of coating deposited on ~~the said bottom of the article~~ is sufficient to enable it to cover the top edge of the article after rising up the side wall.

9. (Amended) A method according to claim 5, wherein rotation of the article is stopped ~~suddenly~~ after the coating has spread by the desired amount.

11. (Amended) A method according to claim 91, wherein, when the coating that is to be spread under the effect of centrifugal force is deposited, the speed of the article is zero or ~~very small~~ substantially zero.

19. (Amended) Apparatus for applying a coating such as a paint or a varnish on an article having at least one surface that is substantially plane or slightly convex, the apparatus comprising:

- ~~a rotary support for rotating the article;~~
- a dispenser member for depositing a predetermined quantity of coating in the fluid state on a predetermined location of said surface; ~~and~~

- a rotary support for rotating the article so as to spread said predetermined quantity of coating under the effect of centrifugal force; and

- an application member means for applying the coating directly on at least a portion of the surface of the article that is not covered by the coating being spread under the effect of centrifugal force.